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COMPUTER NETWORKS-1 (GATE 2023) - REPORTS

OVERALL ANALYSIS COMPARISON REPORT **SOLUTION REPORT**

ALL(17) CORRECT(9) INCORRECT(8) SKIPPED(0)

Q. 11

[Solution Video](#)

[Have any Doubt ?](#)



Given data 10111100
Then p_1, p_2, p_4, p_8 parity bits that are attached to data to form codeword are

A 1, 0, 0, 0

Correct Option

Solution :
(a)

Given, Data = 10111100
Codeword = $p_1 p_2 1 p_4 0 1 1 p_8 1 1 0 0$

| | |
|---------------------|-----------|
| $P_1 : 1 1 0 1 1 0$ | $p_1 = 1$ |
| $P_2 : 0 1 1 1 1 0$ | $p_2 = 0$ |
| $P_4 : 0 0 1 1 0$ | $p_4 = 0$ |
| $P_8 : 0 1 1 0 0$ | $p_8 = 0$ |

So 1, 0, 0, 0, is answer.

B 1, 0, 0, 1

C 1, 1, 0, 1

D None of these

Your answer is IN-CORRECT

[QUESTION ANALYTICS](#)



Q. 12

[Solution Video](#)

[Have any Doubt ?](#)



Which of following is true in application layer protocols?

A USER, PORT, PASS, LIST, RETV commands are in correct sequence of commands in active FTP.

B SMTP combined with POP3 will follow store and forward technique with help of mediating server.

Your answer is Correct

Solution :
(b)

There is no concept like ideal firewall, every firewall will work according to its design. That is the reason again antivirus software are placed in lan networks even we have hardware firewall outside the LAN. In case of FTP, before downloading the file, authentication is required and that will be done using control commands like USER, PASS. SMTP combined with POP3 is known as client to client protocol.

C Packet filter firewall will detects all types of virus and worms even at application level, so it is called ideal firewall.

D None of these

[QUESTION ANALYTICS](#)



Q. 13

[Solution Video](#)

[Have any Doubt ?](#)



Which of following is true in framing techniques of data link layer?

A In case of bit stuffing, 8 bits or character is stuffed if flag occurs in data part.

B In case of character stuffing, a bit is stuffed if flag occurs in data part.

C Framing techniques will be helpful in detecting errors easily by error detecting policies as data size is decreasing.

Correct Option


Solution :
(c)

The whole idea of bit stuffing is to stuff less bits and synchronization problem is solved. So in bit stuffing only 1 bit is stuffed.

The whole idea of bit stuffing is to stuff less bits and synchronization problem is solved. So in bit stuffing only 1 bit is stuffed.
 In case of character stuffing a ESC character is stuffed to indicate the flag is data.
 As the data is coming from layer to layer, the size of data increases.
 So providing error control for whole data becomes difficult in data link layer.
 So whole data is divided in to small parts, so the errors can be detected easily is known as framing
 Option (c) is answer.


D None of these


Your answer is **IN-CORRECT**

 QUESTION ANALYTICS

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Q. 14

 Solution Video

 Have any Doubt ?



Probability of frame reaching safely to destination is 0.9 in data link layer. Then the mean number of transmissions of a frame is _____.

1.1

Correct Option


Solution :
1.1

Probability of frame reaching safely is Q , then mean number of transmissions of a frame is $\frac{1}{Q}$.

So mean no of transmissions of a frame is $\frac{1}{0.9}$ i.e. 1.1.





Your Answer is 1.11

 QUESTION ANALYTICS

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Q. 15

 Solution Video

 Have any Doubt ?



Bandwidth of channel in shared channel is 200 kbps. Calculate the throughput of slotted aloha at $G = \frac{1}{2}$ is _____. [Upto 1 decimal place]

60.6 [60.6 - 60.7]


Your answer is **Correct**60.6

Solution :
60.6 [60.6 - 60.7]

Throughput of slotted aloha $S = G * e^{-G}$


At $G = \frac{1}{2}$, $S = 0.303$ i.e. 30.3 percent


$$30.3 \times 200 \text{ kbps} = \frac{6060}{100} = 60.6 \text{ kbps}$$

 QUESTION ANALYTICS

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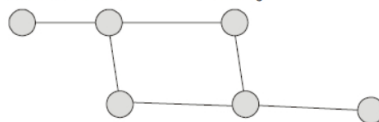
Q. 16

 Solution Video

 Have any Doubt ?



Which is characteristic of circuit switching?



A Reliable and slow

Your option is **Correct**

B Fast and unreliable

C Reservation of resources are available

Your option is **Correct**

D Reservation of resources are available

YOUR ANSWER - a,c,c

CORRECT ANSWER - a,c

STATUS - ✖

Solution :

(a, c)
Properties of circuit switching



QUESTION ANALYTICS



Q. 17

Solution Video

Have any Doubt ?



Which of following is true with respect to router of networking devices?

A

It is a three layer switch and work is network layer.

Your option is **Correct**

B

Router forwards or blocks data by observing MAC destination address of packet.

C

By default router is a collision domain separator as well as broadcast domain separator.

Your option is **Correct**

D

None of these

YOUR ANSWER - a,c

CORRECT ANSWER - a,c

STATUS -

Solution :

(a, c)

These are properties of a router.

By default it act as collision domain separator.

It can separately broadcast with in LAN (255.255.255.255).

As well as in other network i.e. direct broadcast address.



QUESTION ANALYTICS



Item 11-17 of 17

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